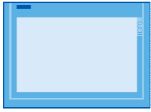


SIMATIC HMI Panels General Overview



SIMATIC HMI Panels

Uniform Naming SIMATIC HMI Panels

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By the uniform naming of the SIMATIC HMI Panels the most important technical features of the equipment are immediately recognizable.

e.g.:

TP1200 Comfort

KTP1000 Basic color PN

*additional attributes for Basic Panels
(due to different specifications within the product line)*

→ Interface „DP“ = Profibus DP or „PN“ = Profinet

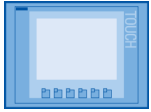
→ Display specification „color“ or „mono“

→ Functional range „Basic“ or „Comfort“

→ Screen size 1200 = 12“ respectively. numbers of keys 8 = 8 keys*)

→ Operating philosophy **TP** = Touch Panel, **KTP** = Key Touch Panel, **KP** = Key Panel

*) additional differentiating factor Safety Functionality **F** = Failsafe (z. B. KP8F)



SIMATIC Basic Panels with Basic Functions

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Basic Panels

➤ For compact applications

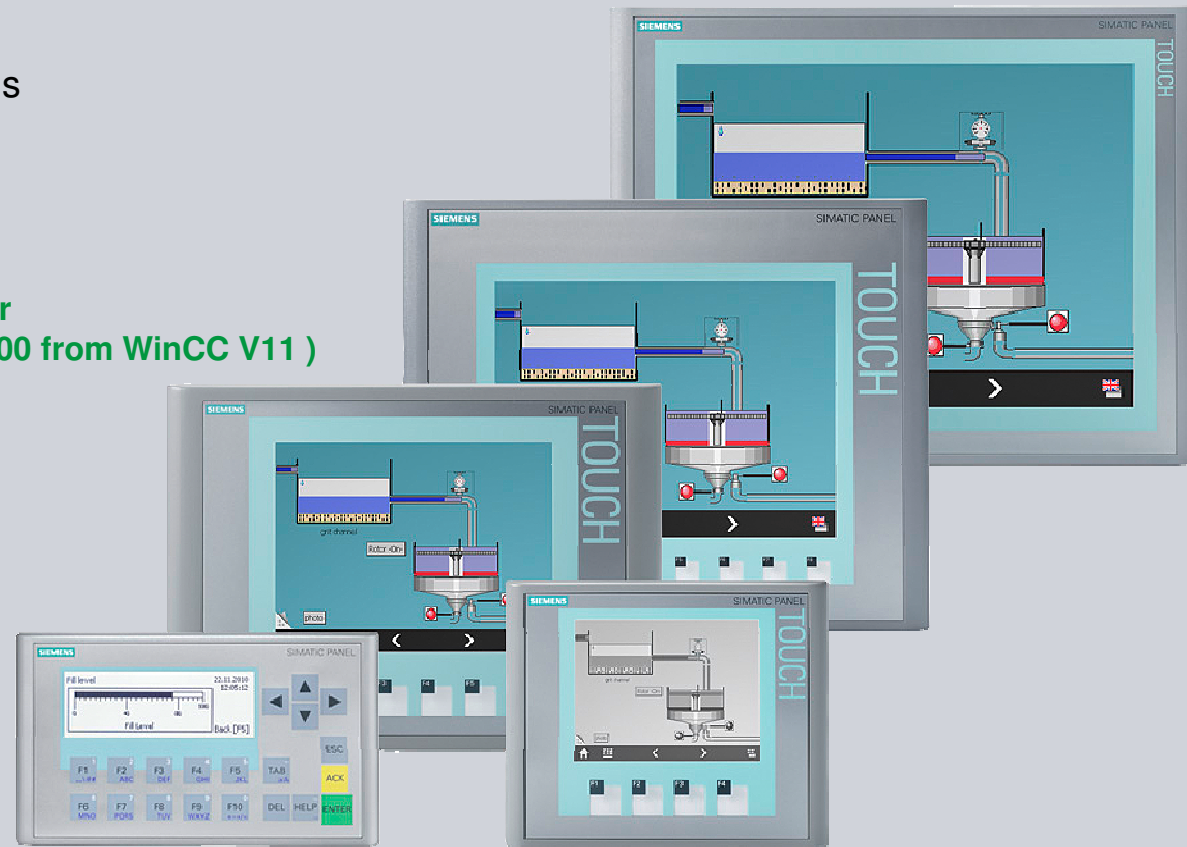
- ✓ Basic HMI functionality
- ✓ Basic service concept
- ✓ Functional consistency

programmable with :WinCC flexible 2008 or
WinCC 10.5-12 (KP300 from WinCC V11)

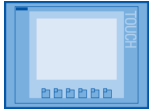
Note:

In comparison with the Comfort panels e.g.:

- ✗ no historical data
- ✗ no scripts
- ✗ no reports (no printer)
- ✗ no Alarm S or Alarm D
- ✗ no direct keys
- ✗ no remote operating
- ✗ no E-mail dispatch
- ✗ lower feature table
- ✗ not all objects available
- ✗ restricted functional range
(e.g. at graphics)



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SIMATIC Basic Panels KP300 Basic mono PN

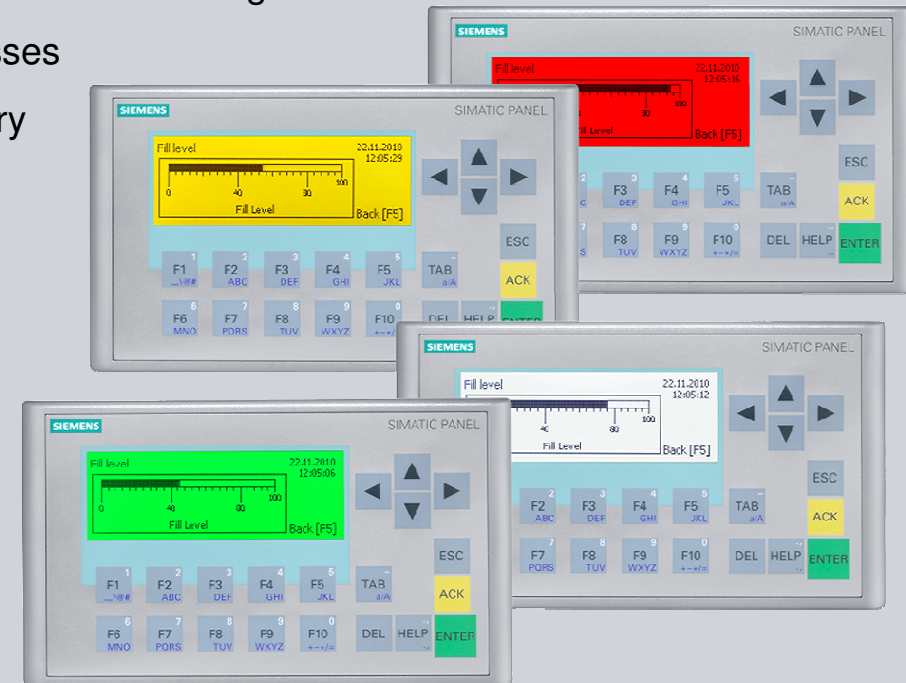
SIEMENS

Characteristics:

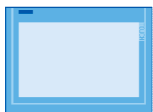
- Free selectable color LED-backlight (white, green, red, yellow)
- The customer can select the color he wants to use as standard backlight color
- These colors can be assigned e.g. to user alarms Classes
- Numeric Keypad with new intuitive alphanumerical entry (Cell phone)

Note:

- **Available in WinCC V11/12 only!**



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SIMATIC Comfort Panels for Extended Requirements

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Comfort Panels

- For demanding applications
- ✓ Comprehensive functional enhancement
- ✓ Maximum performance
- ✓ Wide screen display
- ✓ Innovative service concept
- ✓ Functional consistency
- ✓ Fast migration from Basic to Comfort Panels



Note:

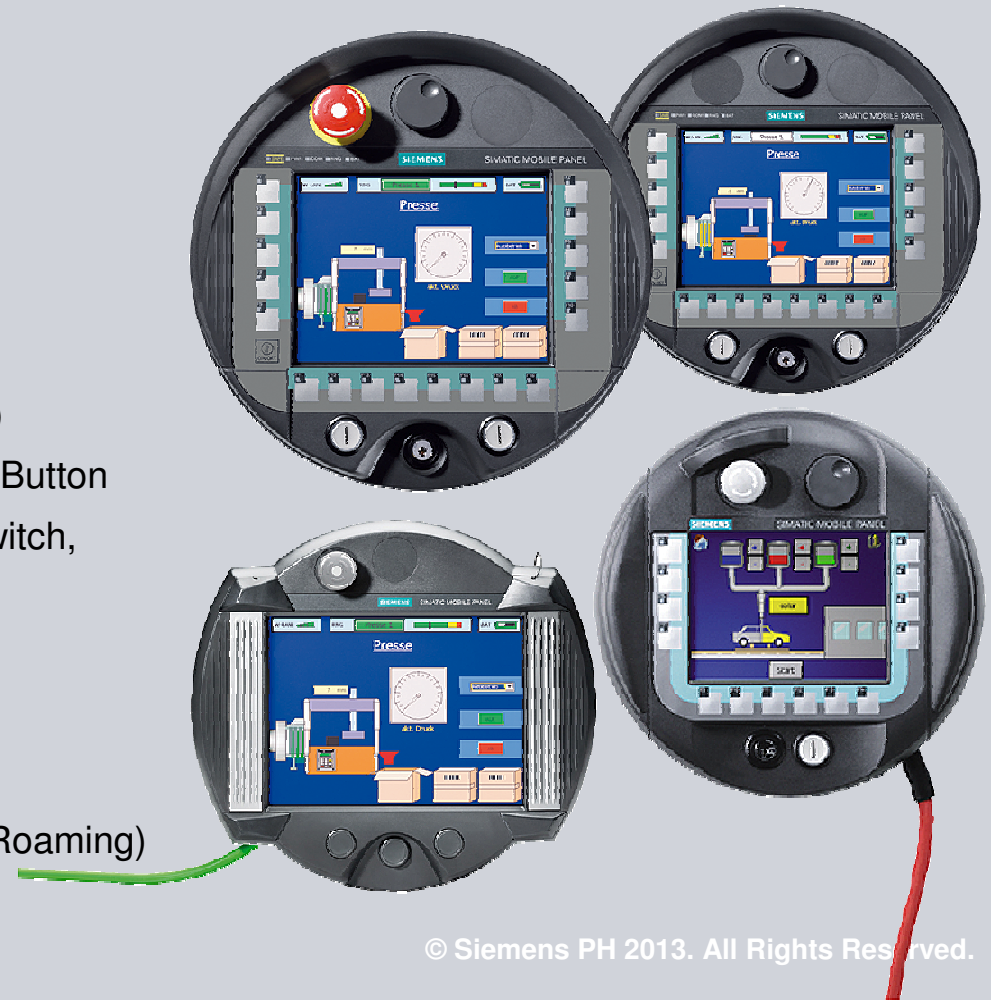
- **Available in WinCC V11 / 12 only!**



SIMATIC Mobile Panels for Mobile Operation

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- For mobile application
- Robust and IP65 all around
- Powerful and high functional range
- Cable-based or IWLAN
- Cable-based for DP or PN available
- Screen size: 6“, 8“, 10“
- Enabling buttons (with cable-based and IWLAN F)
- Available with Stop Button resp. Emergency Stop Button (IWLAN F-version), Hand wheel, Key-operated switch, Illuminated pushbutton
- Pluggable in operation (cable-based)
- IWLAN devices available as:
Non-F-, F- and RFID-version
- IWLAN devices (V2) are supporting iPCF (Rapid Roaming)
- F-devices for Failsafe applications



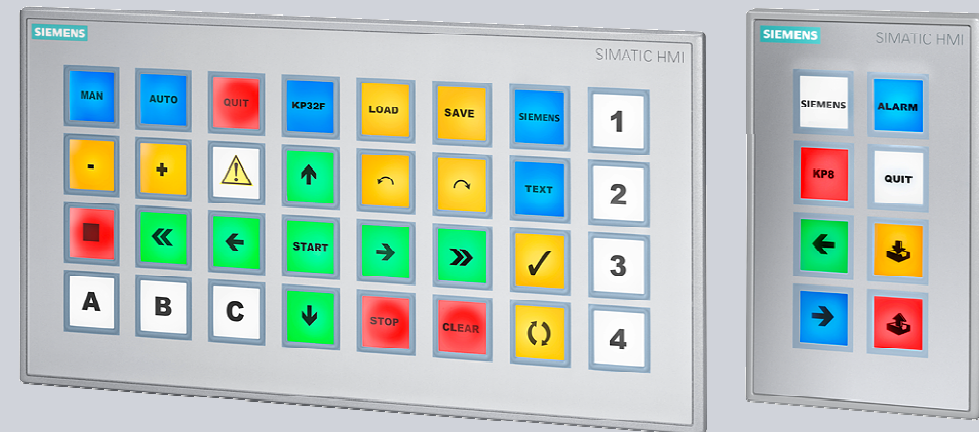
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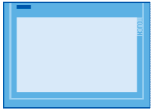
SIMATIC Key Panels

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- **Engineering with Step7**
- Control is made by PLC program (directly in the address area)
- Colors about byte or function blocks controllable
 - red, green, blue, yellow, white, off
 - Brightness adjustable
- Integrated 2-Port PROFINET-Switch
- digital, free configurable I/Os onboard
- The F-Versions have additional Safety-Inputs
- 24-V loop-through power connector

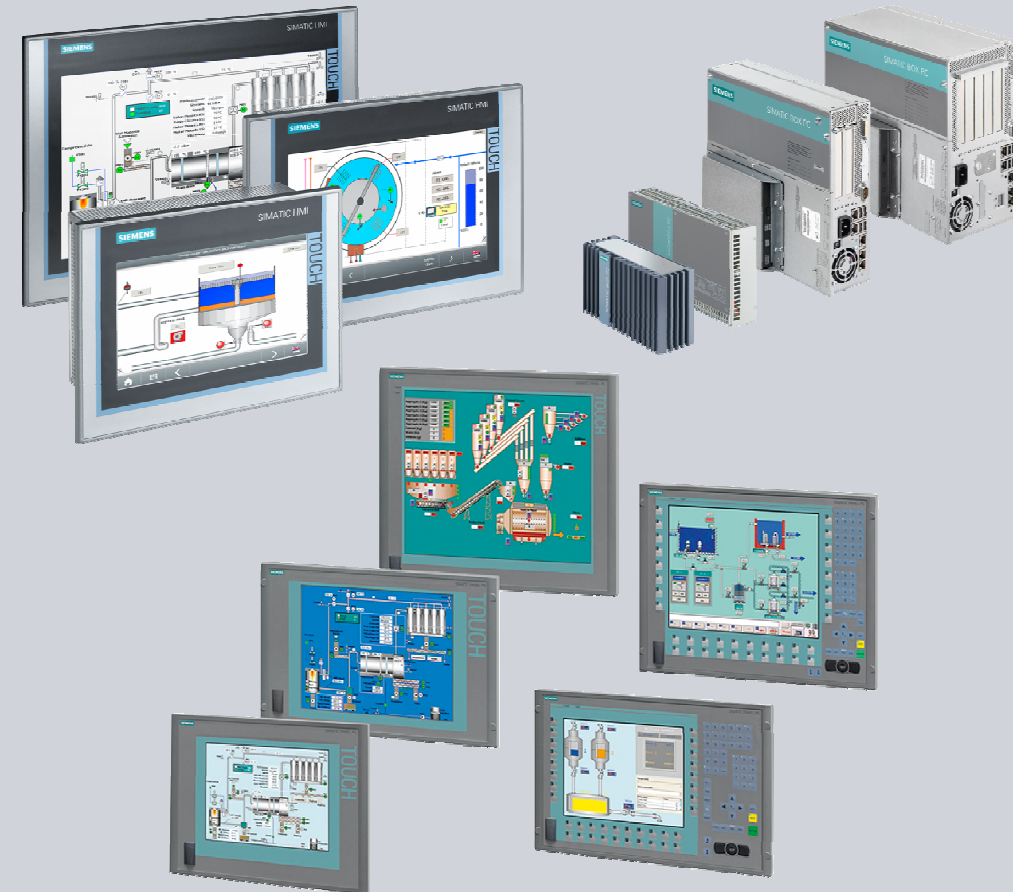


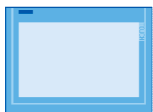
KP32F PN and Panels KP8(F)



SIMATIC IPC, Box PC, Flat Panel and Thin Client Panel

- PC Hardware as platform for WinCC Runtime
- Robust and low-maintenance for industrial use
- Designed for 24 h continuous operation
- Individually configurable
- High performance for applications with high requirements
- New: Nanobox / Nanopanel PC
- Large Portfolio ...



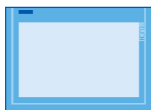


Customized

SIEMENS

https://www.automation.siemens.com/as_crm_tools/CAInfoCenter



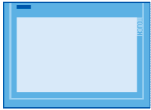


Direct Comparison HMI Basic & Comfort Panels & HMI IPC277D Panel PC

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Criterion	HMI Basic Panel	HMI Comfort Panels	HMI IPC277D Panel PC
Applications	Machine-oriented HMI		
Additional applications	---	---	Controlling, measuring, regulating, data processing and archiving, PC applications
Engineering	WinCCV11/12 Basic or WinCC flexible 2008	WinCC V11/12 Comfort	PC, PC operating systems, as required: WinCC Advanced, WinAC RTX, C/C++, Visual Basic, etc.
Ready to use	No further steps required	No further steps required	SW bundles preinstalled; license key must be transferred
Certificates	CE, UL	CE, UL, shipbuilding FM Class I Div. II, ATEX 2/22	CE, UL, shipbuilding
Configuration option	One order number for each display size and interface	One order number for each display size	Configurable
Delivery time (from ramp)	Stocked product	Stocked product	Built-to-order (15 working days)*
Spare parts/repair	Replacement or repair	Replacement or repair	Repair*
Service, availability of spare parts	10 years	10 years	5 years

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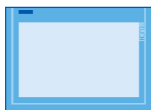


Direct Comparison Functional differentiation (1)

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Criterion	HMI Basic Panel	HMI Comfort Panels	HMI IPC277D Panel PC
Open	Closed/ no WinCC V11 /12 SW options	Closed/ WinCC 11 /12 SW options	Open WinCC SW options Standard PC applications Integration of customer applications
Expandable (PC cards, memory)	---	---	---
Front sides	4:3, monochromatic or 256 colors	Uniform widescreen front sides: High resolution, 16 million colors, large viewing angle, LED backlight; dimmable from 0 to 100%	
Display sizes	3" – 15" ; 4:3	4" - 22" widescreen	7" - 17" widescreen
Type of operation	KP300 keys, touch and keys from 4" to 10", touch 15"	Touch and Keys (4") Touch or keys (7"to 22")	Touch
Direct keys	---	DP and PN direct keys (touch as well)	---
Portrait installation	Possible for 6"	Possible for all touch devices	---
Front-side interface	---	---	USB for 15"/17"
Interfaces (rear), fieldbus on board	1x PN (3", 4", 6", 10" & 15") or 1x DP (6" & 10")	2x 10/100 Mbit/s Ethernet / PROFINET with RT; 1x RS485/422/PROFIBUS; 3x USB V2.0 (1 of which is a USB device) <i>4", see slide 37</i>	2x 10/100/1000 Mbit/s Ethernet / PROFINET with RT; 3x USB V2.0; 1x COM (RS232)
Drives	---	1x SD slot (data), 1x SD slot (for servicing)	1x CompactFlash (accessible) or solid-state drive (internal)

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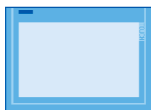


Direct Comparison Functional differentiation (2)

SIEMENS

Criterion	HMI Basic Panel	HMI Comfort Panels	HMI IPC277D Panel PC
Operating system	Linux based	Windows CE	Without Windows Embedded Standard 7 Windows 7 Suitable for Linux
Virus protection	Not susceptible to viruses	Not susceptible to viruses	Typical PC virus protection recommended; BeSy + application protection via EWF
HMI SW runtime	WinCC flexible 2008 or WinCC 10.5 and higher KP300 from WinCC V11	WinCC V11	
HMI quantity structures (tags)	Graduated	Graduated	Configurable
HMI retentivity messages	Retentive message buffer		
HMI engineering	From WinCC basic	From WinCC comfort	From WinCC advanced
Software controller	---	---	WinAC RTX (F) optional
Environment	Front side: IP65 Operating temperature: 0 to 50 °C		
Powerfail concept	Non-volatile	Non-volatile incl. archives	Protection against voltage failure for BeSy and application software possible via write protection (EWF); optional retentive data buffer
System diagnostics	---	SIMATIC system diagnostics viewer	
Additional HW diagnostics	---	---	IPC hardware diagnostics: Temperature, mass memory, operating hours counter

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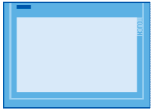


Direct Comparison Differences in system limitations

SIEMENS

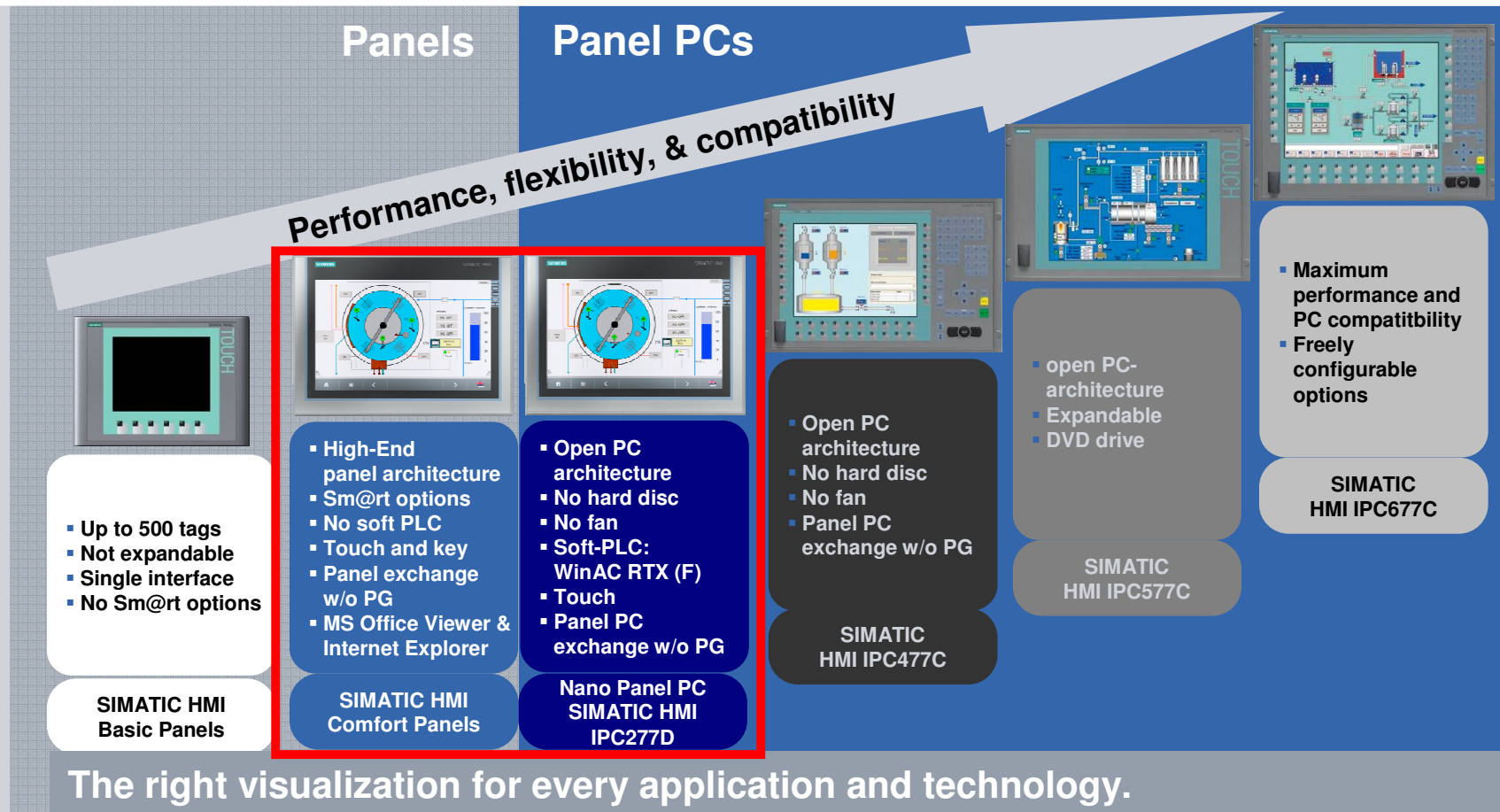
	Basic Panels 3" & 4"	Basic Panels 6", 10" & 15"	Comfort Panels 4"	Comfort Panels 7" - 12"	Comfort Panels 15"-22"	Nanopanel PC IPC277D 7"-19"
Tags	250	500	1024	2048	4096	128 - 4096
Alarms	200		2000	4000	6000	4000
Recipes	5		100	300	500	1000
Screens	50		500		750	500
Archives	---	---	10	50		100
Scripts	---	---	50	100	200	
Online languages	5		32			
Sm@rtClients	---	---	2	3		
Viewer/multimedia	---	---	Internet Explorer, PDF and Excel viewer, Media Player			PC-compatibility

The Comfort panels are clearly positioned as a high-end panels.



Direct Comparison Differences in system limitations

SIEMENS



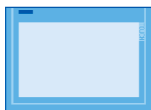
SIMATIC Comfort Panels

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- KP400 Comfort
- KP700 Comfort
- KP900 Comfort
- KP1200 Comfort
- KP1500 Comfort*
- KTP400 Comfort
- TP700 Comfort
- TP900 Comfort
- TP1200 Comfort
- TP1500 Comfort*
- TP1900 Comfort*
- TP2200 Comfort*

** Release since April 2012*





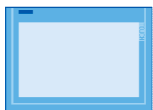
SIMATIC Comfort Panels Technical Details

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	4”W	7”W – 12“W	15”W - 22“W
Widescreen displays	High resolutions, 16 mil. colors, large viewing angle, LED backlighting		
High performance	More than twice as fast as the respective predecessor		
Enhanced functionality	Archives, scripts, IE, PDF/Excel/Word viewer, 0 - 100% dimming		
New service concept	"Panel exchange without PG", USB device interface		
Onboard interfaces	1 PN	2 PN (Switch)	2 PN (Switch) und 1 PN
PROFINET	1 PB	1 PB	1 PB
PROFIBUS	1 Host, 1 Device	2 Host, 1 Device	2 Host, 1 Device
USB	2 SD	2 SD, Audio	
others	Aluminum front-side casings		
Aluminum casing	Portrait installation for all Touch Panels to 22"		
Portrait installation	Push Button Panels with new cell phone-type data entry mechanism		
Improved data entry			

The Comfort panels offer high-end functionality down to the 4" device.

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SIMATIC Comfort Panels Technical Details

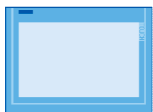
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	4''W	7''W	9''W	12''W	15''W	19''W	22''W
Display size	4,3"	7,0"	9,0"	12,1"	15,4"	18,5"	21,5"
Resolution	480x272	800x480	1280x800		1366x768	1920x1080	
Processor	ARM 532 MHz	x86 500 MHz			x86 1 GHz		
Project memory	4 MB	12 MB			24 MB		
Tags	1024	2048			4096		
Messages	2000	4000			6000		
Recipes	100 / 200 / 200*	300 / 500 / 1000*			500 / 1000 / 2000		
Images	500	500			750		
Archives	10 / 10.000**	50 / 20.000 **					
Scripts	50	100			200		
Viewer/multimedia	Internet Explorer, PDF, Word- and Excel- Viewer, Multimedia Player						
Sm@rtServer	Yes						

*) recipes / data sets per recipe / entries per data set

**) Archives / entries per archive

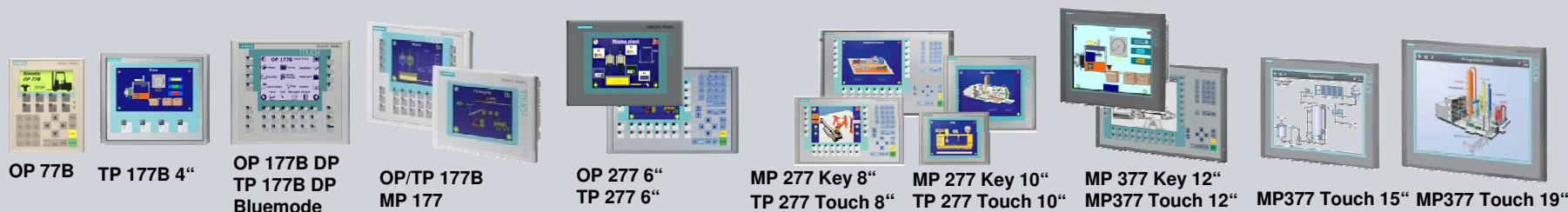
The Comfort panels offer high-end functionality down to the 4" device.



SIMATIC Comfort Panels Migration 77/177/277 to Comfort Panels

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77 / 177 / 277 / 377er
Panels



Comfort Panels

KP400 Comfort
KTP400 Comfort

KP700 Comfort
TP700 Comfort

KP900 Comfort
TP900 Comfort

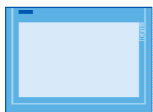
KP1200 Comfort
TP1200 Comfort

KP1500 Comfort
TP1500 Comfort

TP1900 Comfort

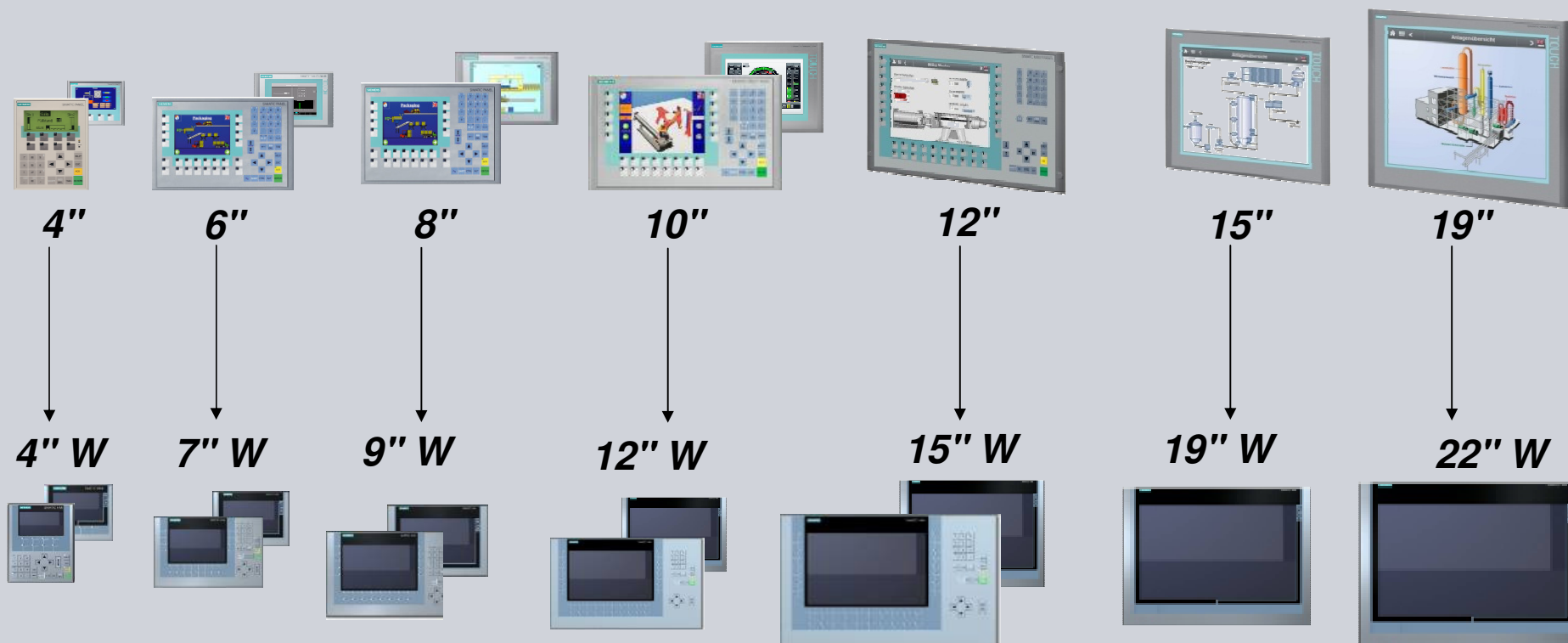
TP2200 Comfort

The SIMATIC HMI Comfort Panels are the successors of OP 77B, the xP 177B series, the MP 177; xP 277 series and the MP377- series



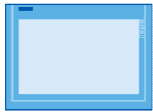
SIMATIC Comfort Panels Migration from 4:3 to the Widescreen aspect ratio

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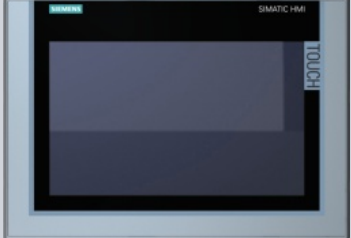


The display area of Widescreen displays with the same diagonal as a 4:3 aspect ratio is lower → migration to larger sizes is suggested.

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SIMATIC Comfort Panels Installation Compatibility and larger display area

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Touch devices	TP 177B 4"	Compatibility with installation location	✓	Increase in display area	+0%	KTP400 Comfort	
	TP/MP 177B 6"		✓		+40%	TP700 Comfort	
	TP 277 6"		✓				
	MP 277 8" Touch		✗		+32%	TP900 Comfort	
	MP 277 10" Touch		✗		+22%	TP1200 Comfort	
	MP 377 12" Touch		✗		+51%	TP1500 Comfort	
	MP 377 15" Touch		✗		+36%	TP1900 Comfort	
	MP 377 19" Touch		✗		+12%	TP2200 Comfort	
Key devices	OP 77B	Compatibility with installation location	✓	Increase in display area	+0%	KP400 Comfort	
	OP 177B 6"		✗		+40%	KP700 Comfort	
	OP 277 6"		✓				
	MP 277 8" Key		✓		+32%	KP900 Comfort	
	MP 277 10" Key		✗		+22%	KP1200 Comfort	
	MP 377 12" Key		✓		+51%	KP1500 Comfort	

Result of accurate weighting between small footprint (optimized dimensions) and compatibility of mounting cutout.

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Thank you for your attention!

I IA AS

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