

6181X Industrial Computers and Thin Clients

Designed for extreme environments and hazardous locations

Industrial computers with extreme design

The Allen-Bradley® 6181X line of industrial computers compliments the Rockwell Automation® XT extreme environment system portfolio with the ability not only to operate efficiently in hazardous locations but actually improve the working experience for operators in these harsh environments.

Industries and applications

Heat, cold, dust and hazardous gas challenge equipment and – even worse – threaten production. Our 6181X computers are suited for high performance under these conditions, especially necessary in these industries:

- Chemical and Pharmaceutical
- Energy and Power Generation
- Mining and Metals
- Water and Wastewater
- Oil and Gas
- Cement and Aggregates
- Pulp and Paper
- Tire and Rubber
- Glass



6181X Box non-display



6181X Integrated Display, PCAP multi-touch



6181X Integrated Display with added sun shield accessory (sold separately)

All 6181X models feature:

- Certified for hazardous location use by cULus Class 1 Division 2 and Class 1 Zone 2, ATEX, UKEx, CCC Ex, and INMETRO
- Global Ordinary Certifications for easy shipping around the world
- Intel i3-1115GRE Dual Core, 2.2GHz, 11th Generation Tiger Lake
- Ships with a 256 GB, 512 GB or 1 TB solid state drive
- Includes one CFAST card slot and one half-length PCIe x1 expansion slot
- DRAM options include 16GB, 32GB or 64GB
- Connectivity: 2x COM ports, 4x USB 3 ports, 2x 1 GB Ethernet Ports, 1 DisplayPort, 1 DVI port
- Includes cloning utility for system back and restore that can be downloaded online
- Available with Windows® 10 IoT Enterprise operating system and compatible with Windows 11 IoT Enterprise
- Trusted Platform Module (TPM) options include: hardware module TPM, firmware TPM (Intel PPT) or no TPM
- ThinManager-ready BIOS on all models
- The computer operates -20...70 °C (-4...158 °F) temperature range inside the cabinet (back side panel mount model and non-display box models). The display side of the panel mount version operates in -20...55 °C (-4...131 °F) temperature range outside the cabinet.
- DC-powered (18 to 32V DC)



Allen-Bradley

by ROCKWELL AUTOMATION

Additional Features

6181X Integrated Display PC and Thin Client additional features

- 12.1" 1028 x 764 resolution, 4:3 aspect ratio
- High-Bright Sunlight readable display (1300 cd/m2)
- 100,000 hour service life display at 25 °C
- Projected Capacitive multi-touch touch delivering the familiar experience of a simple and responsive smartphone screen
- Dry to damp touch screen operation for indoor and outdoor use
- Touch screen settings for finger use, thin gloves and thick gloves to allow flexibility
- Ingress Protection ratings (display model): UL TYPE 1, 4, 4X, 12, 13 and IP66
- Sun shield accessory 6189X-SUNSHIELD available to increase product lifetime in direct sunlight applications

6181X Thin Client additional features

- Dedicated thin client appliance
- No solid state drive or operating system for cost savings and easier administration
- ThinManager ready BIOS for easy integration into Rockwell Automation software
- PXE boot is an available boot option

Above and beyond – features in demand

- PCAP multi-touch Touch Screen
- High-bright sunlight readable 1300 cd/m2 display
- Sunshade available
- Outdoor rated
- Extreme environments
 - Wide operating temperature range -20 to +70 °C
 - 2G/3G vibration and 15G/30G shock
- Ingress protection ratings (display model): UL TYPE 1, 4, 4X, 12, 13 and IP66
- Global Hazardous Location Certifications
- Global Ordinary Location Certifications

6181X Box PC & Thin Client

Additional Features

- Wall mount bracket is standard.
- Book mount accessory, 6189V-BOOKBRKT, available to optimize space



Flexible options

First, choose your preferred set-up. Choose a non-display box computer to build a two-piece solution. Or choose one of our 12-inch touch screen integrated display models for an integrated experience. For integrated display solutions, choose the advanced projected capacitive (PCAP) model. Finally, add accessories. Sun shield attachments offer added protection from UV and infrared radiation. PC riser cards add versatility. For added flexibility in the field, memory, CFAST drives, and solid-state drives (SSD) can be easily upgraded.



Specifications

6181X Industrial Panel and Box Thin Clients and PCs		
	Non-Display Models	Display Models
Catalog numbers	Box PC: 6181X-000NWNNDNB-3xxxxxxG-xxx(x) Box Thin Client: 6181X-000NWNNDNB-3xNNNNxG-xxx(x)	Panel PC: 6181X-121PPMXDNB-3xxxxxxG-xxx(x) Panel Thin Client: 6181X-121PPMXDNB-3xNNNNxG-xxx(x)
Display size	NA	12.1", sunlight readable
Touch screen	NA	Projected Capacitive, multi-touch, settings for thin and thick gloves, dry to damp operation
Display brightness	NA	1300 cd/m2 (nit)
Display lifetime		100,000 hrs (typical @ 25 °C)
Bezel	NA	Aluminum
Mount	Wall (Book Mount with accessory)	Panel
Processor type	Intel i3-1115GRE Dual Core, 2.2GHz, 11th Generation Tiger Lake	
RAM	16 GB, 32 GB, or 64 GB max.	
2.5" SSD store drive	256 GB, 512 GB, 1TB, or none (Thin Client)	
CFAST slot	64 GB CFAST accessory is available	
I/O ports	2x COM, 4x USB 3.0 ports, 2x 1 GB Ethernet Ports, 1 DisplayPort, and 1 DVI port	
Expansion slots	1 half-length PCIe x1 installed (1 half-length PCI riser card accessory is available)	
Operating system	Windows 10 IoT Enterprise 2021 LTSC or none (Thin Client)	
ThinManager	ThinManager ready - all models	
TPM	HW TPM, FW TPM (Intel PPT), or No TPM	
Power	18-32V DC	
Dimensions	251 x 353 x 83.4 mm (7.5 x 13.20 x 3.28 in.)	279 x 349 x 101.2 mm (10.98 x 13.74 x 3.98 in.)
Shock, operating	15 g (1/2 sine, 11ms)	
Shock, non-operating	30 g (1/2 sine, 11ms)	
Temperature, operating	-20...+70 °C (-4...+158 °F)	Display side: -20...+55 °C (-4...+131 °F) Enclosure side: -20...+70 °C (-4...+158 °F)
Temperature, non-operating	-30...+80 (-22...+176)	
Vibration, operating	0.012 in. p-p (10...57 Hz); 2 g peak, (57...640 Hz)	
Vibration, non-operating	0.018 in. p-p (10...57 Hz); 3 g peak, (57...640 Hz)	
Ratings	NA	UL TYPE 1, 4, 4X, 12, 13 and classified by UL in accordance with IEC 60529, IP66 when properly mounted on a flat surface of an equivalent-type enclosure
Hazardous location certifications	cULus, IECEX, INMETRO, ATEX, UKEx, CCC Ex	
Ordinary location marks, etc...	EAC, BSMI, Morocco, KC, RCM, NOM, China RoHS, Turkey RoHS, UAE RoHS, KSA RoHS, REACH, WEEE, BIS, CE	

Review product nameplate label to verify needed certifications.

Hazardous location certifications and ratings

Integrated Display			Non-display		
Region	Rating	Temperature Range	Region	Rating	Temperature Range
United States	Class I Division 2, Groups A, B, C, D T4 Class II Division 2, Groups F, G T6 Class III Division 1 T6 Class I Zone 2, IIC, T4 Class II Zone 22, IIIB, T70 °C	$-20\text{ °C} \leq T_a < 55\text{ °C}$ $(-4\text{ °F} \leq T_a \leq 131\text{ °F})$ (display side) $-20\text{ °C} \leq T_a \leq 70\text{ °C}$ $(-4\text{ °F} \leq T_a \leq 158\text{ °F})$ (backside)	United States	Class I Division 2, Groups A, B, C, D T4 Class I Zone 2, IIC, T4	$-20\text{ °C} \leq T_a \leq 70\text{ °C}$ $(-4\text{ °F} \leq T_a \leq 158\text{ °F})$
Canada	Class I Division 2, Groups A, B, C, D T4 Class II Division 2, Groups F, G T6 Class III Division 1 T6 Class I Zone 2, IIC, T4 Class II Zone 22, IIIB, T70 °C		Canada	Class I Division 2, Groups A, B, C, D T4 Class I Zone 2, IIC, T4	
Europe (ATEX)	II 3 GD, Ex ec IIC T4 Gc, Ex tc IIIC T70 °C Dc, UL 23 ATEX 3066X		Europe (ATEX)	II 3 GD, Ex ec IIC T4 Gc, UL 23 ATEX 3066X	
United Kingdom (UKEX)	II 3 GD, Ex ec IIC T4 Gc, Ex tc IIIC T70 °C Dc, UL23UKEX2943X		United Kingdom (UKEX)	II 3 GD, Ex ec IIC T4 Gc, UL 23UKEX2943X	
Global/IECEX	Ex ec IIC T4 Gc, Ex tc IIIC T70 °C Dc IECEX UL 23.0060X		Global/IECEX	Ex ec IIC T4 Gc, IECEX UL 23.0060X	
Brazil (INMETRO)	Ex ec IIC T4 Gc, Ex tc IIIC T70 °C Dc UL-BR 23.1284X		Brazil (INMETRO)	Ex ec IIC T4 Gc UL-BR 23.1284X	
China (CCC)	Ex ec IIC T4 Gc, Ex tc IIIC T70 °C Dc		China (CCC)	Ex ec IIC T4 Gc	



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