



Linux terminal computer with
10.1" Multitouch Display and
ARM® Cortex™ A15 processor.

Key Features

- › Energy self-sufficient
- › multifunctional

Overview

The piA-SF-II is a panel PC based on the piA-AM5728-PM processor module (ARM® Cortex™-A15 architecture – AM5728). It features a 10.1" multitouch display, a continuous real glass front, and LED backlighting. The IPC ensures continuous operation at temperatures up to +60°C and is fanless.

The system supports data exchange via CAN/ CANopen, Ethernet, WLAN, RS485, and USB, as well as wirelessly via GSM/UMTS/LTE.

The use of Linux highlights the system's sustainability. In addition to the preconfigured Ångström base system, any Linux distributions with ARMv7 support (e.g., Debian, Poky) can be used. A cross-compiler SDK (C/C++, Qt, various libraries) is available for developing custom applications.

Due to its architectural similarity to the widely used BeagleBoards, extensive documentation from a large developer community and numerous code examples are readily accessible.

Applications

GSM tracking offers a wide range of options for control and monitoring. Alerts are also sent as soon as defined zones are left or specific events occur.

The piControl system is administered and managed via the pironex portal. There, the operator receives recorded operational data such as times, access logs, or reservations, as well as current location information.

The wide range of functions allows the device to be used, for example, for time tracking, warehouse management, product tracking, or even for defining and monitoring tourist routes.

Functions

- › Reading and writing RFID cards
- › Terminal operation
- › Access control
- › Door control
- › Time tracking system
- › Attendance monitoring
- › GSM tracking
- › Data acquisition
- › Rental management
- › Reservation management
- › Occupancy management
- › Device control, triggering actions
- › Location-independent software updates
- › Remote diagnostics
- › Telemetry / remote measurement
- › Operating hours / runtime tracking



Technical characteristics

Basics

Supply voltage	6,5-16V (12V nominal) or internal power supply for 6 months.
Battery	rechargeable backup battery (Li-ion).
Cooling	passive and fanless cooling.
Antennas	GSM (internal) GPS antenna (internal) Bluetooth antenna (internal)
Temperature range	operating temperature 0 to 40°C storage temperature -20 to 85°C
Housing	individually customizable rugged plastic enclosure.
Dimensions	190 mm x 130 mm x 52 mm (D/W/H)

Interfaces

Bluetooth	5.0 or 4.2 Bluetooth Low Energy
Mobile network	2G
Serial	TTL-UART
Programming interface	JTAG
RFID / NFC	13,56 Mhz full NFC forum compliance

Additional Features

Sensors	inertial measurement unit with 3-axis accelerometer, 16-bit, ± 16 g; 3-axis gyroscope, 16-bit, 2000 °/s.
Memory	20 kB RAM / 128 kB Flash
RTC	real-time clock
IO-Interfaces	2 x digital input (12V), 2 x output Vin, 2 x output (Vin / GND).
SIM	customer-selectable, either embedded SIM chip or nano SIM card.
Signal indicator	acoustic buzzer, max. 95 dB.
Processor	STM32, high-performance processor with power-saving function.
Display	e-paper, 264 x 176 px b/w, 2.7 inches, RGB backlit.
IP-protection class	IP67