



PDL Mk.IV GARDT®

ARINC 615/615A Portable Data Loader



eEnabled Software Management

The Perfect Solution designed with our
Innovation Partners
Lufthansa Technik & Corena



eESM@techsat.com

- Integrated all-inclusive wireless Portable Data Loader
- ARINC 615/603 and ARINC 615A data loading via standard aircraft Data Loading Connector
- TechSAT GARDT® Technology for secure data loading according to Airbus Security Requirements for Portable Data Loader
- Ruggedized tablet PC included (Panasonic ToughPad FZ-G1)
- LAN and WLAN, optionally 3G (GSM/UMTS), for wireless FLS transfer and reporting
- Direct data loading from internal HDD media repository or USB stick; optional from external media USB 3.5" floppy disk or USB DVD drive
- TechSAT wireless GARDT® unit providing 4 Tx and 8 Rx ARINC 429, 4 function discretes, 1 Ethernet interface for A615A data loading, and 1 WLAN interface for wireless connection to the tablet
- A615 load cable and A603 load stub cable adapter in cable storage, specific cables (e.g. FADEC) available
- Fully compliant with standard PDL adapter cables
- Interface to FLS Management Systems, e.g. eESM Lufthansa Technik



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Application Scope

TechSAT's portable data loader **PDL Mk.IV GARDT®** is a wireless integrated software and hardware solution for loading aircraft software parts, such as databases and LRU updates, into airborne computers according to the ARINC 615/615A and ARINC 603 standards.

Features

The PDL Mk.IV GARDT® is tailored to the rough working environment in a maintenance shop floor. The loader is built from commercial-off-the-shelf parts and components. The assembly's system design and the assembly itself are targeted at fulfilling ground support equipment (GSE) requirements.

The core system consists of a ruggedized tablet. TechSAT's wireless GARDT® Unit, which is compliant to the Airbus Security Requirements for Portable Data Loader, supplies the ARINC 429 resources.

TechSAT's PDL GARDT® Frontend application for Windows® serves as data loader utility. The connection between the tablet and the GARDT® unit is wireless, the user carries only the tablet to control the data loading process.

The protector case is used as cable storage for the different types of connector cables required to connect the PDL Mk.IV GARDT® to A615, A603, or A615A LRUs.

The WiFi and 3G/UMTS capability allows easy and safe import of load parts and load report transmission from/to a central maintenance IT infrastructure directly to/from the PDL.

An interface to any FLS Management tool can be provided on request.

eEnabled Software Management

"eESM" -the innovation project of Lufthansa Technik

Based on decades of experience in aircraft maintenance, LHT developed a beneficial administration software tool which supports the entire data handling process of LRU software updates. In close cooperation with its partner companies Corena and TechSAT, LHT extended this software to an integrated tool set which consists of three parts, using state-of-the-art technology, forming the all-encompassing solution:

- > the eESM software configuration / distribution management tool
- > the Data Loader Adapter
- > the Data Loader Family

The complete set is distributed under the brand name **eEnabled Software Management (eESM)** including TechSAT's Portable Data Loaders as the core product for data loading tasks.

www.techsat.com

Technical Data

Tablet Features

- Full-ruggedized Panasonic ToughPad FZ-G1
- 128 GB SSD hard drive
- 10.1" full HD multi-touch touchscreen display
- WiFi and optional 3G/UMTS
- Battery operation: 5 hours (acc. Panasonic)
- Battery charging time: 4.5 hrs. off / 6.5 hrs. on (with 110 VAC/60 Hz, 230 VAC/50 Hz, or 115 VAC/400 Hz external power)

Wireless GARDT® Unit

- Linux based single board computer
- 4 A429 transmitter channels
- 8 A429 receiver channels
- 4 function discretes
- 1 Ethernet interface
- WiFi
- Compliant to Airbus Security Requirements for Portable Data Loader

Interfaces, Connectors

- Internal connectors (inside protector case):
 - D-sub 50 connector for connecting the loader cable
 - Power inlet for connecting the loader cable or a power cable
- External connectors (outside protector case):
 - 3-conductor C14 power receptacle to charge the tablet battery with external 230 VAC/50 Hz, 110 VAC/60 Hz, or 115 VAC/400 Hz power source

Power Supply, Consumption

- Wireless GARDT® unit:
 - 110 V/400 Hz via Data Loading Connector
 - 28 VDC via Data Loading Connector
 - 110 V/60 Hz-400 Hz or 220 V/50 Hz via power inlet
 - 10 W maximal consumption
- Tablet (battery charging):
 - 230 VAC/50 Hz (via external power inlet)
 - 110 VAC/60 Hz (via external power inlet)
 - 115 VAC/400 Hz (via external power inlet)

Physical Dimensions

- Size outside: L 365 mm, B 265 mm, H 155 mm
- Weight in total: 6,2 kg, tablet only 1 kg

Operating Environment

- Temp. operating: -10 °C to 55 °C
- Temp. storage: -20 °C to 60 °C
- Humidity operating: 30% to 80% RH non-condensing

Software Support

- TechSAT PDL GARDT® Frontend for Windows® 7 32 bit/64 bit

Scope Of Delivery

- PDL GARDT® Frontend CD (PN 202132)
- A615-3 load cable, 200 cm with A/C power (PN 602849-020)
- A603 adapter cable, 10 cm (PN 602589-001)
- 2 Power cables, US and European standard

Extras

- FADEC load cable (PN 1015652)
- External 3.5" USB floppy drive (PN 1016518)
- External 3.5" USB DVD drive (PN 1010081)

Part Number

- 403555/PDL Mk.IV GARDT®