



PDL Mk.II GARDT®

ARINC 615/615A Portable Data Loader



eEnabled Software Management

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



eESM@techsat.com

- 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
- Full-ruggedized 10.1" Panasonic Toughbook CF-19 in a polyethylene protector case
- Direct data loading from USB 3.5" floppy disk, USB DVD drive, USB stick, or HDD media repository
- Import of load parts from all types of USB media or via LAN to HDD media repository
- TechSAT GARDT® unit providing 4 Tx and 8 Rx ARINC 429, 4 function discretes, and 1 Ethernet interface for A615A data loading
- Gigabit Ethernet interface accessible via RJ45 from outside the protector case
- Three external power operation modes: 230 VAC / 50 Hz, 110 VAC / 60 Hz, and 115 VAC / 400 Hz
- A615 load cable and A603 load stub cable adapter in cable storage included
- Fully compliant with standard PDL adapter cables
- Interface to FLS Management Systems, e.g. eESM Lufthansa Technik





techSAT

mastering
integration
complexity

PDL Mk.II GARDT®

ARINC 615/615A Portable Data Loader

Application Scope

TechSAT's portable data loader **PDL Mk.II GARDT®** is an integrated software and hardware solution for loading aircraft software parts, such as databases and operational programs, into airborne computers according to the ARINC 615, ARINC 603, and ARINC 615A standards.

Features

The PDL Mk.II GARDT® is protected by a watertight, crushproof, and dust-proof housing, which ensures safe operation even in harsh flightline environments.

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 notebook PC. TechSAT's 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 load parts can be imported to the internal media repository through various media types, either via the USB port of the PDL or by connecting the PDL to an internal LAN.

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

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.

Technical Data

Notebook Features

- Full-ruggedized Panasonic Toughbook CF-19
- 320 GB HDD shock-mounted and quick-release
- 10.1" 1024x768 XGA touchscreen display
- Battery:
 - Battery operation: 9 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)
- Housed in rugged polyethylen protector case

GARDT® Unit

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

Interfaces, Connectors

- Internal connectors (inside protector case):
 - 53-pin ARINC 615 receptacle for connecting the A615-3 load cable
 - Standard USB port for connecting external USB devices
- External connectors (outside protector case):
 - 3-conductor C14 power receptacle with ON/OFF switch to connect the PDL to an external 230 VAC/50 Hz, 110 VAC/60 Hz, or 115 VAC/400 Hz power supply
 - RJ45 Ethernet socket with cover (e.g. for LAN access)

Power Supply

- 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 462 mm, B 340 mm, H 170 mm
- Weight in total: 9.5 kg (21 lbs.)

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

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

Scope of Delivery

- Toughbook CF-19, US or DE keyboard
- PDL GARDT® Frontend CD (PN 202132)
- A615-3 load cable, 250 cm (PN 602513-025)
- A603 adapter stub cable, 10 cm (PN 602589-001)
- 2 Power cables, US and European standard

Extras

- FADEC load cable (PN 1015652)
- A603 load cable, 200 cm (PN 602829-020)
- External 3.5" USB floppy drive (PN 1016518)
- External 3.5" USB DVD drive (PN 1010081)

Part Number

- 403475/PDL Mk.II-GARDT®