PDL Mk.II GARDT®

ARINC 615/615A 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
- Full-ruggedized 10.1” Panasonic Convertible Toughbook CF-20 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
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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 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.

The notebook features a robust housing, which ensures safe operation even in harsh flightline environments.

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.

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.

PDL Sync Solution
The PDL Sync is TechSAT’s lightweight solution for Electronic Distribution of Loadable Software Aircraft Parts (eliminating the need for physical media), it provides the following features:

- Central management of software parts for entire fleets
- Electronic distribution of software parts to PDLs
- Definition of aircraft configurations at tail sign level
- Tracking of data loading operations

Technical Data

Notebook Features
- Full-ruggedized Panasonic Convertible Toughbook CF-20
- 320 GB HDD shock-mounted and quick-release
- 10.1” 1920 x 1200 WUXGA touchscreen display
- Removable battery:
  - Battery operation: 8 hrs. with single battery, 16 hrs. with dual battery (acc. Panasonic)
  - Battery charging time: 4.5 hrs. off / 6.5 hrs. on (with 110 V AC/60 Hz, 230 V AC/50 Hz, or 115 V AC/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
  - 2 USB 2.0 ports and 1 USB 3.0 port for connecting external USB devices
  - 2 RJ45 Ethernet ports (e.g. for LAN access)
- External connectors (outside protector case):
  - 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

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 411 mm, B 323 mm, H 170 mm
- Weight in total: 7.2 kg (15 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® 7 32 bit / 64 bit and Windows® 10 64 bit

Scope of Delivery
- Toughbook CF-20, US or DE keyboard
- PDL GARDT® Frontend CD (PN 202132)
- A615-3 load cable, 250 cm (PN 602513-025)

Power cable

Extras
- A603 adapter stub cable, 10 cm (PN 602589-001)
- 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®