Gilardoni FEPME

1000 HC DV BHS

Integration

Specifications

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1.0   Introduction

1.1   Comments

This document identifies the required control interface between the scanner and the airport's integrated Baggage Handling System (BHS).

This interface is subject to continuous modifications depending on the constant evolution of GILARDONI machines.

2.0   Interface requirements

This section specifies the general, functional and physical characteristics of the interface between the Scanner and BHS.

2.1   General characteristics

2.1.1   Scanner Features

The Scanner will be responsible for creating X-ray images of the baggage presented by the BHS, for subsequent analysis by an operator or operators.

The Scanner has the functional responsibility for :

- Scanning of luggage passing through the scanner
- Provide a security status for each piece of luggage associated with its identifier.
- Ensure the running modes (normal or forced) of the conveyor, requested by the BHS.
- Provide the status of the input and output cells (in real time) for monitoring by the BHS. In terms of communications with the BHS, the Scanner shall:

    - Provide acknowledgements required by the BHS.
    - Use the acknowledgements sent by the BHS.
    - Use baggage identifiers from the BHS if exist.
    - Provide security decisions associated with baggage identifiers.

2.1.2   BHS features

The BHS will be responsible for controlling the baggage conveyor process from check-in to the carousel or departure conveyor. The BHS will also be responsible for the control of the transport conveyors, including the scanner, and the tracking of the baggage through the system. Baggage may need to be diverted to physical inspection stations based on operator decisions or loss of tracking (if a tracking system is used).

The BHS will have the following functional responsibilities:

- Identify the position and status of luggage.
- Tracking luggage
- Control the conveyor according to the desired operating mode (normal or forced)
- Correctly orientate baggage according to its security status. In terms of communications with the scanner, the BHS shall:

    - Provide baggage identifiers to the scanner (not mandatory).
    - Provide acknowledgements required by the Scanner.
    - Use the acknowledgements sent by the scanner.
    - Process security statuses sent by the scanner associated with baggage identifiers.

2.2   T.O.R. Interface signals

These signals should allow the RX to operate in simple mode (without an network communication).

Whit the T.O.R communication, these characteristics must be respected:

- Only one piece of luggage at a time will be introduced into the RX

- This baggage will be routed to the cell of your exit conveyor, to ensure a reliable waiting and recollection point with the operator security decision being transmitted on the T.O.R. contacts.
- A new cycle can then begin.

2.2.1 T.O.R. interface signals Scanner to BHS

All these signals are referenced to a common potential "COM_BHS".
- POS_REM (Scanner is in Remote Functional Mode): feedback to inform the BHS that the "non interactive mode" function (system controlled by the BHS) is activated.
- RX_LOG (The system is logged as RX + 1 remote P.O.): signal to inform the BHS that an operator is logged on a client.
- SYS_RUN (The machine is functional):
- CVR_RUN (Conveyor Run Return): feedback to inform the BHS that the conveyor is running.
- CVR_EN (Conveyor operation authorization): the machine is ready to response to an external command.
- SCANNING (Scanning in progress): baggage data line, signal that inform the BHS that the machine is acquiring data.
- OP_CLR (Operator CLEAR Safety Status)
- OP_ REJ (Operator REJECT safety status)
- OP_ OTO (Operator TIME-OUT Safety Status)
- BNA (Baggage Not Analyzed)

2.2.2 T.O.R. BHS to Scanner interface signals

All these signals are referenced to a common potential "COM_PLC".

- PWR_ON (Remote machine control): signal to put the machine in "non interactive mode" (machine controlled from the BHS)
- CVR_ON (Conveyor remote run control): signal to start and stop the conveyor.
- ESTOP_IN (Emergency stop from BHS).

2.2.3 RX Emergency Stop Interface

- ESTOP_OUT = Mutualisation of all the machine's U.A.s on two wires (dry contact).
  NOTE: The machine's original emergency stops are equipped with a secondary wired circuit which allows them to be functional even if the machine is powered down.