CON1 (Top View)

1 9
8 16
(Front View)

9
16

15

Soldered together
To CON1.1
To CON2.16
To CON3.1

D
C
A
B
E

400

570 20 10

CON2 (Top View)

Note: Maximum notch height = 1.5mm

1
15
(Front View)

1 2
15 16

H
J

F
G
K
CON3
L
CON4

70

600

Parts List

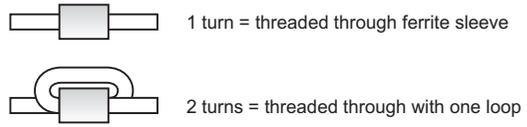| Item	QTY	Description	Vendor
A	1	39-01-2165 housing (2x 8 way 4.2mm pitch Mini-Fit Jr receptacle)	Molex
B	6	0039000209 (tin plated, female, brass) crimps (4A @ 22AWG, 2A@26AWG)	Molex
C	1	Cable tie to secure ferrite into place	-
D	1	Ferrite sleeve (2 turns)	See notes
E	6	20mm black heat shrink sleeve (spread along the length)	-
F	5	Standard AWG 26 wire (see comments below)	-
G	2	Standard AWG 22 wire	-
H	1	90142-0016 housing (2x8way 2.54mm pitch receptacle)	Molex
J	3	90119-0120 (tin plated) crimps	Molex
K	1	Stackable black 4mm banana plug (553-0500-01)	Deltron
L	1	Stackable red 4mm banana plug (553-0500-01)	Deltron

Connectivity

CON1 Pin	Ferrite 1 loop	CON2 Pin	CON3 Pin	CON4 Pin	Gauge (AWG)	Colour	Comment
16, 7	16	1	-	-	26	White	SSP_TXD (Validator to Host)
14, 5	14	5	-	-	26	Blue	SSP_RXD (Host to Validator)
9	9	-	-	1	22	Red	V_IN
1	1	16	1	-	22	Black	GND

Notes
Pins 16 and 7 on CON1 are linked together.
Pins 14 and 5 on CON1 are linked together.

Ferrite Sleeve
Ferrite sleeve needs to have >800Ω @ 100MHz.
Recommended parts:
a) Wurth 74270057 - 808Ω @ 100MHz (**two turns**)
b) Wurth 74271111 - 800Ω @ 100MHz (**two turns**)

1 turn = threaded through ferrite sleeve

2 turns = threaded through with one loop

Comments
CON1 connects to Smart Ticket
CON2 connects to Host
CON3 connects to V- (GND)
CON4 connects to V+ (12V or 24V)

For item G, 2 wires are short links for pins 16 and 7 and pins 14 and 5; 2 wires are from CON1 to CON2; and 1 wire is from CON2 to the soldered intersection.
CON3 and CON4 are for powering up the NV200 so V+ can be connected to 12V or 24V

All dimensions are in mm ±5mm, unless specified

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3rd Angle Projections

NOT TO SCALE

TITLE: Smart Ticket to Host assembly (customer)

DRAWN BY	DATE
A Lunsong	31/01/2012

CHECKED BY: -   DATE: -

MATERIAL
All parts must be rated to at least UL94-VW1. All connector housings must be rated to UL94-V0. Must be RoHS compliant.

FINISH: -

ISSUE NO.	MOD NO.	DATE	MOD BY
C2	-	30/01/2013	A Lunsong